

What is claimed is:

1. A semiconductor integrated circuit device comprising:

a first MOS transistor having a first gate, a first backgate, a first conducting region, and a second conducting region, the first MOS transistor having the first backgate and the first conducting region thereof electrically connected together;

a second MOS transistor having a second gate, a second backgate, a third conducting region, and a fourth conducting region, the second MOS transistor having the second backgate and the third conducting region thereof electrically connected to the first backgate and the first conducting region, the second MOS transistor receiving a first direct-current voltage at the fourth conducting region thereof;

a comparator that compares the first direct-current voltage with a second direct-current voltage outputted from the second conducting region; and

a switch that operates according to an output of the comparator so as to connect, when the first direct-current voltage is higher than the second direct-current voltage, the second gate to a predetermined potential and, when the first direct-current voltage is lower than the second direct-current voltage, the second gate to the third conducting region or to the second conducting region.

2. A semiconductor integrated circuit device as claimed in claim 1,

wherein the first and second MOS transistors are of a same conductivity type.

3. A semiconductor integrated circuit device as claimed in claim 1, further comprising:

an error amplifier that outputs to the first gate a control signal that is commensurate with a difference between a voltage commensurate with the second direct-current voltage and a predetermined voltage.

4. A semiconductor integrated circuit device as claimed in claim 1, wherein the predetermined potential is a ground potential, and

wherein the semiconductor integrated circuit device further comprises:

an error amplifier that outputs to the first gate a control signal that is commensurate with a difference between a voltage commensurate with the second direct-current voltage and a predetermined voltage.

5. A semiconductor integrated circuit device as claimed in claim 1, wherein the comparator is a third MOS transistor having a third gate, a third backgate, a fifth conducting region, and a sixth conducting region, the third MOS transistor having the third backgate and the fifth conducting region thereof being electrically connected together, the third MOS transistor receiving at the sixth conducting region thereof a voltage based on the second direct-current voltage, the third MOS transistor receiving at the third gate thereof a voltage based on the first direct-current voltage

6. A semiconductor integrated circuit device as claimed in claim 2, wherein the first and second MOS transistors are of a P-channel type.

7. A semiconductor integrated circuit device as claimed in claim 2,

further comprising:

an error amplifier that outputs to the first gate a control signal that is commensurate with a difference between a voltage commensurate with the second direct-current voltage and a predetermined voltage.

8. A semiconductor integrated circuit device as claimed in claim 2, wherein the comparator is a third MOS transistor having a third gate, a third backgate, a fifth conducting region, and a sixth conducting region, the third MOS transistor having the third backgate and the fifth conducting region thereof being electrically connected together, the third MOS transistor receiving at the sixth conducting region thereof a voltage based on the second direct-current voltage, the third MOS transistor receiving at the third gate thereof a voltage based on the first direct-current voltage

9. A semiconductor integrated circuit device as claimed in claim 6, wherein the predetermined potential is a ground potential.

10. A semiconductor integrated circuit device as claimed in claim 6, further comprising:

an error amplifier that outputs to the first gate a control signal that is commensurate with a difference between a voltage commensurate with the second direct-current voltage and a predetermined voltage.

11. A semiconductor integrated circuit device as claimed in claim 6,

wherein the comparator is a third MOS transistor having a third gate, a third backgate, a fifth conducting region, and a sixth conducting region, the third MOS transistor having the third backgate and the fifth conducting region thereof being electrically connected together, the third MOS transistor receiving at the sixth conducting region thereof a voltage based on the second direct-current voltage, the third MOS transistor receiving at the third gate thereof a voltage based on the first direct-current voltage

12. An output circuit comprising:

a first MOS transistor having a first gate, a first backgate, a first conducting region, and a second conducting region, the first MOS transistor having the first backgate and the first conducting region thereof electrically connected together;

a second MOS transistor having a second gate, a second backgate, a third conducting region, and a fourth conducting region, the second MOS transistor having the second backgate and the third conducting region thereof electrically connected to the first backgate and the first conducting region, the second MOS transistor receiving a first direct-current voltage at the fourth conducting region thereof;

a comparator that compares the first direct-current voltage with a second direct-current voltage outputted from the second conducting region; and

a switch that operates according to an output of the comparator so as to connect, when the first direct-current voltage is higher than the second direct-current voltage, the second gate to a predetermined potential and, when the first direct-current voltage is lower than the second direct-current voltage, the second

gate to the third conducting region or to the second conducting region.

13. A car-mounted electric appliance including a power supply, wherein the power supply includes a semiconductor integrated circuit device or output circuit comprising:

a first MOS transistor having a first gate, a first backgate, a first conducting region, and a second conducting region, the first MOS transistor having the first backgate and the first conducting region thereof electrically connected together;

a second MOS transistor having a second gate, a second backgate, a third conducting region, and a fourth conducting region, the second MOS transistor having the second backgate and the third conducting region thereof electrically connected to the first backgate and the first conducting region, the second MOS transistor receiving a first direct-current voltage at the fourth conducting region thereof;

a comparator that compares the first direct-current voltage with a second direct-current voltage outputted from the second conducting region; and

a switch that operates according to an output of the comparator so as to connect, when the first direct-current voltage is higher than the second direct-current voltage, the second gate to a predetermined potential and, when the first direct-current voltage is lower than the second direct-current voltage, the second gate to the third conducting region or to the second conducting region.